

AMENDMENT TO THE CLAIMS

The following listing of claims will replace all previous listings:

Listing of Claims

1. (Original) A method for measuring a temperature during a test for determining a concentration of a medically significant component of a biological fluid, comprising the steps of:
 - a) providing a sensor in which the biological fluid reacts with a reagent to define a reaction zone; and
 - b) making a temperature measurement within the reaction zone.
2. (Original) The method of claim 1 wherein the sensor comprises a disposable test strip.
3. (Original) The method of claim 1 wherein the reaction zone comprises a capillary fill space.
4. (Original) The method of claim 2 wherein the wherein the reaction zone comprises a capillary fill space.
5. (Original) The method of claim 1, wherein step (b) comprises:
 - b.1) applying a first signal having an AC component to the biological fluid;
 - b.2) measuring a first AC response to the first signal; and
 - b.3) using the first AC response to produce an indication of a temperature in the reaction zone.
6. (Original) The method of claim 5, wherein the first AC response comprises an admittance.
7. (Currently Amended) The method of claim 5, further comprising the steps of:
 - (c) applying a second signal having an AC component to the biological fluid, wherein said first and second signals may be applied sequentially or simultaneously;

- (d) measuring a second AC response to the second signal; and
 - (e) further using the second AC response to produce the indication of a temperature in the reaction zone.
8. (Original) A method for measuring a temperature during a test for determining a concentration of a medically significant component of a biological fluid, comprising the steps of:
- a) applying a first signal having an AC component to the biological fluid;
 - b) measuring a first AC response to the first signal; and
 - c) using the first AC response to produce an indication of a temperature of the biological fluid.
9. (Original) The method of claim 8, wherein the first AC response comprises an admittance.
10. (Currently Amended) The method of claim 8, further comprising the steps of:
- (c) applying a second signal having an AC component to the biological fluid, wherein said first and second signals may be applied sequentially or simultaneously;
 - (d) measuring a second AC response to the second signal; and
 - (e) further using the second AC response to produce the indication of a temperature of the biological fluid.
11. (Original) The method of claim 8, wherein the first signal is an AC signal.
12. (Original) The method of claim 10, wherein the second signal is an AC signal.
13. (Original) The method of claim 8, wherein the first AC response comprises magnitude information.
14. (Original) The method of claim 10, wherein the second AC response comprises an admittance measurement.

15. (Original) The method of claim 10, wherein the second AC response comprises magnitude information.
16. (Currently Amended) The method of claim 8, wherein the first signal comprises a number of frequencies applied sequentially or simultaneously, wherein the number is greater than one.
17. (Original) The method of claim 16, wherein the number is not less than two and not greater than four.
18. (Original) The method of claim 16, wherein the number is greater than four.
19. (Original) The method of claim 8, wherein the AC component of the first signal has a frequency not less than 1 Hz and not greater than 20kHz.
20. (Original) The method of claim 8, wherein the biological fluid is blood.
21. (Currently Amended) The method of claim 8, wherein said first signal comprises four first signals applied sequentially or simultaneously, and wherein step (c) comprises determining the temperature using

$$T_{\text{est}} = b_0 + b_1(Y_1 - Y_2) + b_2(Y_3 - Y_4) + b_3H_{\text{est}}$$

Where: T_{est} is the temperature,
 b_0, b_1, b_2 and b_3 are constants,
 Y_1, Y_2, Y_3 and Y_4 are respective AC responses
of the four first signals (expressed as admittance), and
 H_{est} is ~~the~~ an estimated hematocrit value.
22. (Original) A method of accounting for the effect of a temperature variation on a test for a glucose concentration of a biological fluid comprising:

- a) applying at least a first test signal having an AC component to the biological fluid, the first test signal having a first frequency;
 - b) measuring at least a first AC response to the first test signal;
 - c) determining a temperature value of the biological fluid using the first AC response; and
 - d) determining a temperature-corrected glucose concentration of the biological fluid based at least in part upon the temperature value.
23. (Original) The method of claim 22, wherein the determining a temperature value comprises determining a hematocrit value of the biological fluid and using the hematocrit value in combination with the first AC response to determine the temperature value.
24. (Original) The method of claim 22, wherein the first AC response includes an admittance.
25. (Currently Amended) The method of claim 22, further comprising the steps of:
- e) applying a second test signal having an AC component to the biological fluid, the second test signal having a second frequency, wherein said first and second test signals may be applied sequentially or simultaneously; and
 - f) measuring at least a second AC response to the second test signal; and
 - g) using the second AC response in the determining a temperature value of the biological fluid.
26. (Currently Amended) The method of claim 25, further comprising the steps of:
- h) applying a third test signal having an AC component to the biological fluid, the third test signal having a third frequency, wherein said first, second and third test signals may be applied sequentially or simultaneously;
 - i) measuring at least a third AC response to the third test signal;
 - j) applying a fourth test signal having an AC component to the biological fluid, the fourth test signal having a fourth frequency;
 - k) measuring at least a fourth AC response to the fourth test signal; and

- 1) using the third AC response and the fourth AC response in the determining a temperature value of the biological fluid.